



(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:

28.10.1998 Bulletin 1998/44

(51) Int. Cl.⁶: C08G 63/664, A61K 47/34

(43) Date of publication A2:

16.10.1996 Bulletin 1996/42

(21) Application number: 96105777.5

(22) Date of filing: 12.04.1996

(84) Designated Contracting States:

AT CH DE FR GB IT LI SE

(72) Inventor: Shalaby, Shalaby W.

Anderson, SC 29625 (US)

(30) Priority: 13.04.1995 US 421222

(74) Representative:

UEXKÜLL & STOLBERG

(71) Applicant: Poly-Med Inc.

Anderson, SC 29625 (US)

Patentanwälte

Beselerstrasse 4

22607 Hamburg (DE)

(54) **Hydrogel-forming , self-solvating absorbable polyester copolymers, and methods for use therefor**

(57) The present invention provides novel hydrogel-forming, self-solvating, absorbable polyester copolymers capable of selective, segmental association into compliant hydrogels upon contacting aqueous environment. Pharmaceutical formulations comprising the novel polyester copolymers of the invention are also disclosed which provide a protective barrier to prevent post-surgical adhesion, can be used to treat of defects in conduits such as blood vessels, and for controlled release of a biologically active agent for modulating cellular events such as wound healing and tissue regeneration or therapeutic treatment of diseases such as infection of the periodontium, dry socket, bone, skin, vaginal, and nail infections.



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	WO 95 03357 A (MASSACHUSETTS INST TECHNOLOGY) 2 February 1995 *see in particular p. 7-10; examples 2,5-7; claims 16-24 * ---	1-8, 15-20, 24-29	C08G63/664 A61K47/34
X	EP 0 092 918 A (ICI PLC) 2 November 1983 * see in particular p. 8-10 and the examples * ---	1-8, 15-17, 24-29	
X	EP 0 166 596 A (ICI PLC) 2 January 1986 * see in particular page 3, lines 11-30; example 4; p.9 l.12- l.25; p.11 lines 16-26 * ---	1-8, 15-20, 24-29	
X	EP 0 636 378 A (JOHNSON & JOHNSON MEDICAL) 1 February 1995 *see claims 1,5,10,16; example 1* ---	1,15-20, 24-29	TECHNICAL FIELDS SEARCHED (Int.Cl.6)
D,A	US 5 198 220 A (DAMANI NALINKANT C) 30 March 1993 *see example VI, and col. 6, lines 15-52 * ---	1-29	A61K C08G A61L
P,X	WO 95 35097 A (YEH MING KUNG;DAVIS STANLEY STEWART ; JENKINS PAUL GEORGE (GB); UN) 28 December 1995 *see in particular claims 1,4,5,8-10,24; page 5, line 15 - page 6, line 19 * -----	1,15-20, 24-29	
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 30 July 1998	Examiner Isert, B
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EP0 FORM 1503 03 82 (P04C01)



CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1-14, 15-17 in part, 21-23, 24-29 in part

Copolymers and compositions comprising the component types A and/or C

2. Claims: 15-17 in part; 18-20; 24-29 in part

Compositions comprising the component types A and B